AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

Claims 1-53: (canceled)

Claim 54. (previously presented) A method of depositing a metal layer on a semiconductor wafer comprising:

depositing a seed layer on a surface of the wafer;

immersing the wafer in an electrolytic solution containing metal ions;

biasing the wafer negatively with respect to the electrolytic solution so as to create a current flow at a first current density between the electrolytic solution and the wafer and thereby deposit a plated layer electrolytically on the wafer; and

after a combined thickness of the seed and plated layers has reached a predetermined value, increasing the current flow to a second current density greater than the first current density.

Claim 55. (previously presented) The method of claim 54 wherein the plated and seed layers include copper.

Claim 56. (currently amended) The method of claim 54 wherein a top surface of the semiconductor wafer includes features to be filled with metal

and the method includes applying a current flow at a third current density such that features are filled with metal.

Claim 57. (previously presented) The method of depositing a metal layer on a semiconductor wafer comprising:

immersing a wafer having a seed layer on the surface thereof in an electrolytic solution containing metal ions;

biasing the wafer negatively with respect to the electrolytic solution so as to create a current flow at a first current density between the electrolytic solution and the wafer and thereby deposit a plated layer electrolytically on the wafer; and

after a predetermined time, increasing the current flow to a second current density greater than the first current density.

Claim 58. (previously presented) The method of depositing a metal layer on a semiconductor wafer comprising:

contacting the wafer with a electrolytic solution containing metal ions;

applying a plating current to the wafer so as to create a current flow at a first current density between the electrolytic solution and the wafer and thereby deposit a plated layer electrolytically on the wafer; and

after a combined thickness of the seed and plated layers has reached a predetermined value, increasing the current flow to a second current density greater than the first current density.

Claim 59. (previously presented) The method of depositing a metal layer on a semiconductor wafer comprising:

depositing a seed layer on the surface of the wafer;

contacting the wafer with a electrolytic solution containing metal ions;

applying a plating current to the wafer so as to create a current flow at a first current density between the electrolytic solution and the wafer and thereby deposit a plated layer electrolytically on the wafer;

after a predetermined time, increasing the current flow to a second current density greater than the first current density.